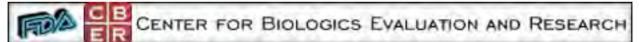
Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps)

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DE Guidance

- Finalization
- Significant Changes
- Major aspects of the guidance
 - Focus on items that have been changed
 - Discuss all donor screening criteria
 - Discuss donor tests

Abbreviations

- DE = Donor Eligibility
- RCDAD = Relevant Communicable Disease Agent or Disease
- HIV = Human Immunodeficiency Virus
- HBV = Hepatitis B Virus
- HCV = Hepatitis C Virus
- HTLV = Human Tlymphotrophic virus
- CMV = Cytomegalovirus
- § = Section (of the rule)
 ex. § 1271.3
- PI = Package Insert
- HPC = Hematopoietic stem/progenitor cells

- ID = Individual Donor
- BV = Blood Volume
- PV = Plasma Volume
- CJD = Creutzfeldt-Jakob disease (vCJD=variant)
- NAT = Nucleic Acid Amplification Technology or "Nucleic Acid Test"—
 Polymerase Chain Reaction (PCR) and Transcription-Mediated Amplification (TMA)
- UDHQ = Unified Donor History Questionnaire
- C/W = consistent with

Finalization

- Guidance published 27 February 2007; Reposted as Level II Guidance (minor changes) 8 August 2007
- Implementation date—August 27, 2007
- Finalizes both
 - Draft DE guidance dated May 2004
 - Draft CJD/vCJD guidance dated June 2002
- FDA received comments to both draft guidances and considered those comments when finalizing the combined guidance document
- Guidance is considered FDA's current thinking

Significant Changes from Draft

- "Finalizes" new RCDADs added in draft guidance
 - Vaccinia (smallpox vaccine), West Nile Virus, Sepsis
 - SARS removed from list of RCDADs
- Clarifies requirements for testing labs
 - Registration
- Clarifies relevant medical records
 - Autopsy reports
- Updates many donor screening criteria
 - UDHQ

Significant Changes

- Clarifies eligibility related to chlamydia and gonorrhea for donors of reproductive HCT/Ps
- Additional discussion of dementia when screening for CJD
- vCJD screening no longer includes asking about use of bovine insulin

Significant Changes

- Clarifies what screening criteria in the clinical evidence or physical evidence may be reviewed "in light of other information obtained about the donor"
- Finalizes current list of specific donor tests that FDA believes are adequate and appropriate to reduce the risk of transmission of relevant communicable diseases under 1271.80(a) and 1271.85(a)

Significant Changes

- Reproductive donors discussed in much more detail in the guidance
- There are many more changes and this list is not comprehensive
- Recommend reviewing the guidance in detail

Who makes the DE Determination?

- A responsible person must determine and document the donor's eligibility (§ 1271.50(a))
- Responsible person is a person who is authorized to perform designated functions for which he or she is trained or qualified (§ 1271.3(t))
- Responsible person should have appropriate medical training and adequate knowledge of relevant Federal regulations and guidance

What communicable disease agents, not listed in § 1271.3(r)(1), have been determined to be relevant?

- WNV
- Sepsis
- Vaccinia
- SARS was not included
- Guidance provides information about how each new RCDAD meets § 1271.3(r)(2) definition of RCDAD
- Appendix provides further information

Departures and HCT/P Deviations

- Departure intended change from established procedures that occurs prior to HCT/P distribution and is consistent with applicable regulations and standards
- Departures must be recorded and justified at the time a departure occurs; before distributing HCT/Ps under the departure, a responsible person must determine that the departure did not increase the risk of communicable disease transmission (§ 1271.47(d))

Departures and HCT/P Deviations

- Example of departure: use of a different manufacturer's reagents because usual reagents are not available at a recovery site
- HCT/P deviation is defined in § 1271.3(dd) as an event that is inconsistent with applicable regulations, standards, or established specifications, or is unexpected or unforeseeable
- Since an HCT/P deviation is not intentionally made, § 1271.47(d) would not apply

Summary of Records

Includes

- Statement that communicable disease testing was performed by lab that is either CLIA certified or meets equivalent requirements as determined by CMS
- 2. Listing & interpretation of results of all tests performed for RCDADS, and, if applicable, for CMV
- 3. Name and address of establishment making DE determination

Summary of Records

- 4. Statement noting reason for determination of donor ineligibility based on screening, when HCT/P released under § 1271.65 (for allogeneic use in a first- or second-degree blood relative, directed repro, urgent medical need)
- Also notes that for donors with multiple CMV results who have "seroconverted" may either indicate positive test result or provide information about all test results

Summary of Records

- Accompanies HCT/P when placed into distribution, including when the distribution occurs within one facility (for example: cell processing lab releases cells that are sent to a patient floor in the same facility)
- Once the consignee receives the summary of records, it is not necessary for the records to physically accompany the HCT/P to the bedside as long as the records are available for review by medical personnel needing to access those records in order to provide patient care
- Summary of Records may be made electronically accessible so long as they are in compliance with § 1271.55(c) (specifically, deletion of donor's personal information)

Shipping HCT/Ps in quarantine

- Identify the donor (e.g., by a distinct identification code affixed to the HCT/P container);
 - removed "but not by name, social security number, or medical record number (except in the case of an autologous, or directed reproductive donors, or donations made by first-degree or second-degree blood relatives § 1271.55(a)(1))"

Shipping HCT/Ps in quarantine



The quarantine ship Rhin, at large in Sheerness. Source: National Maritime Museum of London

- State that the donor-eligibility determination is not complete; and
- State that the HCT/P must not be implanted, transplanted, infused, or transferred until the donoreligibility determination is complete, except in cases of urgent medical need under § 1271.60(d)

Screening donors who are 1 month of age or younger

- § 1271.75 requires that all donors be screened
- Donor medical history interview conducted with respect to the donor
- You should also screen the birth mother when the donor is an infant 1 month of age or less, including
 - Donor medical history interview
 - Review of available medical records
 - Physical exam or physical assessment recommended when practical

Testing for donors who are 1 month of age or younger

- Under § 1271.80(a) you must collect and test a specimen from the birth mother instead of the donor
- Under § 1271.80(b) all specimens must be collected within 7 days of the donation, unless the donation consists of peripheral blood stem/progenitor cells or bone marrow according to 1271.80(b)(1).
- If a specimen from the birth mother is unavailable, donors 1 month of age or younger would not be eligible to donate

Under § 1271.75(a) donor screening includes review of relevant medical records:

- Current donor medical history interview
- Current report of physical assessment or physical exam
- Other available records

Donor Medical History Interview

- Documented dialogue (§ 1271.3(n)) concerning donor's medical history and relevant social behavior
- With donor if living
- If donor unable to participate in interview, may seek same information from others (NOK, nearest available relative, household member, partner, friend, primary physician)

Donor Medical History Interview (cont)

- May take place in person or over the phone
- If questionnaire is self-administered, in order to be a "documented dialogue," the interviewer should review and verify the answers with the individual who filled out the form

- Physical assessment cadaveric donor
- Physical exam (PE) living donor
 - May examine only those parts of the body that are necessary to evaluate for RCDADs based on relevant donor history obtained during the interview and review of available records
 - You may rely on records of recent report of PE by a health care professional

Other records (if available)

- Lab test results (other than results required for DE determination)
- Medical records
- Coroner or autopsy reports
- Records or information from other sources (medical examiner reports, police records, records from other establishments)
- "Available" means that record or information exists or is pending, can be obtained through due diligence, within a reasonable amount of time

Except as noted, you should determine to be ineligible any potential donor who exhibits one or more of the following conditions or behaviors:

- MSM in the preceding 5 years
- Persons who injected drugs for a nonmedical reason in the preceding 5 years, including IV, IM or subcutaneous injections

 Persons with hemophilia or other related clotting disorders who have received human-derived clotting factor concentrates in the preceding 5 years (risk factor for HIV, Hepatitis B and Hepatitis C). A person who has received human-derived clotting factor concentrates only once may be eligible to donate.

- Persons who engaged in sex in exchange for money or drugs in preceding 5 years
- Persons who have had sex in preceding 12 months with any person previously described or with a person who has HIV infection, HBV infection, or clinically active HCV infection
- Persons exposed in previous 12 months to known or suspected HIV, HBV, and/or HCVinfected blood through percutaneous inoculation (needle-stick) or contact with open wound, non-intact skin, or mucous membrane

- Children born to mothers with or at risk for HIV infection
 - If 18 months of age or younger; or
 - If breast-fed within previous 12 mos.
- Persons who have been in juvenile detention, lock up, jail or prison > 72 consecutive hours in preceding 12 months
- Persons who lived with (resided in same dwelling) another person who has HBV or clinically active HCV in preceding 12 mos.

Persons who have

- Undergone tattooing, ear piercing or body piercing in preceding 12 mos, in which sterile procedures were not used
- Had past diagnosis of clinical, symptomatic viral hepatitis after their 11th birthday, unless evidence from the time of illness documents that the hepatitis was identified as being caused by hepatitis A virus, EBV, or CMV

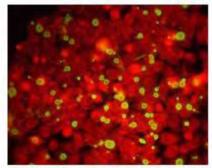
 Persons who are deceased and have a documented medical diagnosis of sepsis or have documented clinical evidence consistent with sepsis that is not explained by other clinical conditions at the time of death ("Ruleout sepsis" noted but subsequent notations indicate a diagnosis other than sepsis-then, potential donor may be eligible)

Vaccinia deferrals described in detail in guidance—unchanged

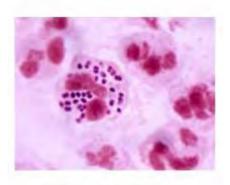
Persons who have

- Medical diagnosis or suspicion of WNV infection (based on symptoms and/or lab results, or confirmed WNV viremia) should be deferred 120 days following diagnosis or onset of illness, whichever is later
- Tested positive/reactive for WNV using FDAlicensed or investigational WNV NAT donor screening test in preceding 120 days

- Reproductive HCT/P donors who have been treated for or had chlamydia or gonorrhea in preceding 12 months. However, persons who have been treated for chlamydia or gonorrhea infection may be eligible if evidence is presented that the treatment occurred more than 12 months ago and was successful
- Example: A potential donor has a medical record indicating that she was treated for Chlamydia 14 months ago. No follow-up testing was performed at the time of treatment. The medical record serves as evidence that she received treatment more than 12 months ago.



http://www.sexualhealthbirmingham.co.uk /imgs/chlamydia.jpg



today.msnbc.msn.com

Continued--Since the medical record does not include information that a follow-up test was performed after treatment, and was negative, there is no evidence that the treatment was successful. However, a current negative test for Chlamydia (as part of the current donor testing) may serve as evidence that the treatment that occurred more than 12 months ago was successful.

 Persons who have been diagnosed with vCJD or any other form of CJD

CJD/vCJD screening questions – if person interviewed is not familiar with the term "Creutzfeldt-Jakob Disease" or "variant CJD" you may try to describe in layman's terms. If the person being interviewed is still not familiar with those terms, you may consider the lack of familiarity with those terms as a negative response to questions using those terms

- Persons diagnosed with dementia or any degenerative or demyelinating disease of the central nervous system or other neurological disease of unknown etiology
- Delirium, for example caused by toxic/metabolic disease or recent head trauma, would not necessarily be considered dementia and should be evaluated by the medical director
- Donors with dementia who are confirmed by gross and microscopic evaluation of the brain to be caused by CVA or brain tumor and confirmed NOT to have evidence of TSE on micro exam of the brain may be acceptable based on evaluation by the medical director

- Persons who are at increased risk for CJD
 - Received non-synthetic dura mater
 - Received human pituitary derived growth hormone
 - >/= 1 blood relative diagnosed with CJD
- Persons with a history of CJD in blood relative unless:
 - Diagnosis subsequently found incorrect
 - CJD was iatrogenic
 - Lab testing (gene sequencing) shows donor does not have mutation associated with familial CJD

- Persons who spent 3 months or more cumulatively in the UK between 1980 through the end of 1996
- Military or related personnel who resided at US military bases in Northern Europe for 6 months or more cumulatively from 1980-1990; or elsewhere in Europe for 6 months or more cumulatively between 1980-1996
- Persons who spent 5 years or more cumulatively in Europe from 1980 until the present (including time spent in the UK between 1980-1996)

 Persons who received any transfusion of blood or blood components in the UK or France between 1980 and the present

- Persons or their sexual partners who were born or lived in certain countries in Africa after 1977 (HIV group O)
- Persons who have received a blood transfusion or any medical treatment involving blood after 1977 in those same African countries (HIV group O)

 Clarification of HIV Group O screening - Establishments utilizing an HIV-1/2 antibody donor screening test that has been licensed by FDA and is specifically labeled in the Intended Use Section of the package insert as sensitive for detection of HIV group O antibodies may delete items 27 and 28 from their screening procedures.

 If such establishments continue to ask items 27 and 28, the donor eligibility may be based on the results of the donor screening test regardless of the answers to items 27 and 28. Establishments that do not utilize an HIV antibody donor screening test that has been licensed by FDA for detection of HIV group O antibodies should continue to ask these items.

www.fda.gov/cber/tissue/prod.htm www.fda.gov/cber/products/testkits.htm

Items 27 and 28 refer to screening questions pertaining only to HIV group O.

- Xenotransplantation product recipients or intimate contacts of a xenotransplantation product recipient
 - Persons who share housing or are casual contacts (hugging or kissing without the exchange of saliva) are not considered intimate contacts

Except as noted, you should determine to be **ineligible** any potential donor who exhibits one or more of the following examples of clinical evidence of RCDADs

HIV clinical evidence unchanged from draft guidance

- Viral hepatitis clinical evidence unchanged from draft guidance
- Records of lab data with inconclusive history of viral hepatitis that may assist in making the donor eligibility determination include AST, ALT, bilirubin, or PT—if those tests are abnormal but a cause other than viral hepatitis was established, donor may be eligible

- In the clinical evidence and physical evidence sections, there are changes to make the use of the word "unexplained" before both "hepatomegaly" and "oral thrush" to be consistent between sections
- IV. F. 2. --- Added "unexplained" before "hepatomegaly"
- IV. G. 7. --- Added "unexplained" before "oral thrush"

- Syphilis, Chlamydia trachomatis or Neisseria gonorrhea infection (screening and donor deferral for chlamydia and gonorrhea required only for donors of reproductive HCT/Ps)
- Persons who have had or have been treated for syphilis, chlamydia or gonorrhea in the preceding 12 months
- Donors who were treated for the above more than 12 months ago may be eligibile if evidence is presented that treatment occurred more than 12 months ago and was successful

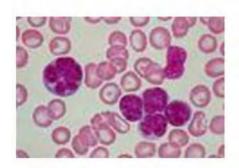
- Vaccinia infection
 - Recent vaccination consistent with risk factor deferral criteria
 - Others c/w physical evidence section

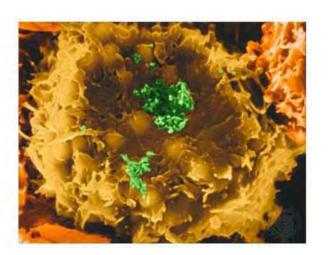
- WNV Infection symptoms nonspecific, so consider in light of other information obtained about the donor in making the donor eligibility determination
- Descriptions same as in the draft guidance

- Sepsis includes but is not limited to bacteremia, septicemia, sepsis syndrome, systemic infection, systemic inflammatory response syndrome or septic shock
- For deceased donors, if any of these conditions is specifically diagnosed in the medical records during a hospital stay immediately preceding death, you should determine the donor to be ineligible. If a living donor appears healthy, the donor usually does not need to be evaluated for sepsis.

HTLV infection (Screening and donor deferral for HTLV required only for viable, leukocyte-rich HCT/P donors)

- Prior positive or reactive test for HTLV
- Unexplained paraparesis; and/or
- Adult T-cell leukemia





You should review the records of the physical assessment or physical examination for any of the following signs of infection with a RCDAD. Some of the following are not physical evidence of HIV, hepatitis, syphilis or vaccinia, but rather are indications of highrisk behavior associated with these diseases and would increase the donor's risk of RCDAD. Except as noted in this section, you should determine to be ineligible any potential donor who exhibits one or more of the following examples of physical evidence of RCDAD or high-risk behavior associated with these diseases.

 Physical evidence for risk of sexually transmitted diseases such as genital ulcerative disease, herpes simplex, chancroid – consider in light of other information obtained about the donor



- Physical evidence for risk of or evidence of syphilis
- Male donors physical evidence of anal intercourse including perianal condyloma





http://www.dph.sf.ca.us/sfcityclinic/stdbasics/stdimages.asp?std=Syphilis

www.emedicine.com/derm/images/411secondary.jpg

Physical evidence of

- Nonmedical percutaneous drug use such as needle tracks; examination should specifically include examination of tattoos, which might be covering needle tracks
- Recent tattooing, ear piercing, or body piercing in the preceding 12 months, in which sterile procedures were not used or instruments that have not been sterilized between uses were used (c/w risk factors)

- Disseminated lymphadenopathy
- Oral thrush
- Blue or purple spots c/w Kaposi's sarcoma





hab.hrsa.gov/tools/palliative/images/P9-10.gif

CDC pathmicro.med.sc.edu/lecture/images/thrush.jpg

- Unexplained jaundice, hepatomegaly, or icterus (hepatomegaly may not be apparent in a physical assessment unless an autopsy is performed)
- Physical evidence of sepsis such as unexplained generalized rash or fever



Large scab c/w recent history of smallpox immunization





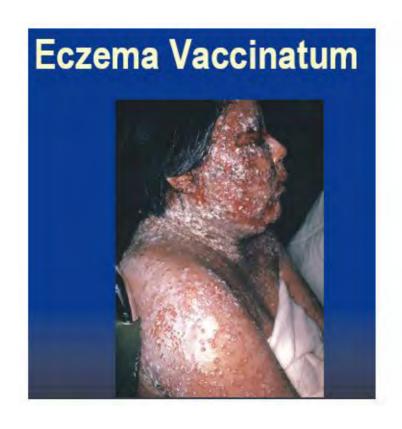
All vaccinia photos from CDC http://www.bt.cdc.gov/agent/smallpox/training/012403mmwr-slideset/

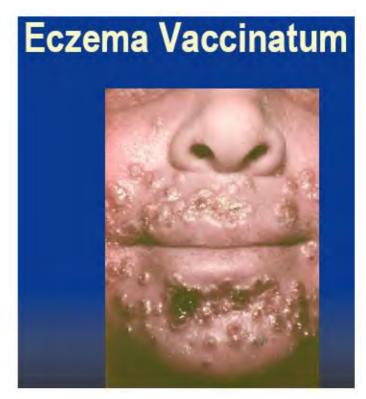






Eczema vaccinatum (seen in vaccinia)



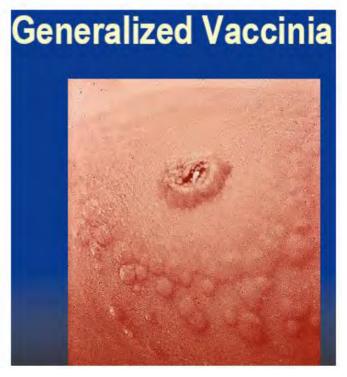


 Severely necrotic lesion c/w vaccinia necrosum



Generalized vesicular rash (generalized vaccinia)





Corneal scarring c/w vaccinial keratitis



Requirements applicable to laboratories performing donor testing for RCDADs

- Registration with FDA (under § 1271.1)
- Under § 1271.80 (c)
 - Use appropriate FDA licensed, approved or cleared donor screening tests, if such tests are available, according to manufacturer's instructions
 - Use donor screening tests specifically labeled for use with cadaveric specimens instead of one more generally labeled if applicable and available

Donor Testing Labs, cont.

- CLIA certified or meet CMS equivalent requirements
- Under § 1271.55(d), maintain documentation of results and interpretation of all testing for at least 10 years after performing the test

- § 1271.80(c) requirements
- Using appropriate FDA-licensed, approved, or cleared donor screening tests
- Test according to the manufacturer's instructions in the test kit's product insert
- Use tests to adequately and appropriately reduce the risk of transmission of RCDADs
- Tests that FDA considers to meet the requirements of § 1271.80(c) are listed in the guidance and will be covered in this talk

- § 1271.80(c) requirements, cont.
- If you test a specimen of cadaveric blood, you must use a donor screening test specifically labeled for cadaveric specimens instead of a more generally labeled donor screening test, when such a test is applicable and available
- More than one test may be necessary to adequately and appropriately test for a single RCDAD
- Currently no NAT tests have indication for use to allow pooled testing of specimens from HCT/P donors, except that specimens from HPC and DLI donors may be pooled for HIV-1/HCV NAT

http://www.fda.gov/cber/products/testkits.htm

- **Triplicate testing** not recommended in any product inserts
- Some OPOs perform triplicate testing according to CDC recommendations for organ donors
- Tissue or eye banks may share donors with OPOs who perform triplicate testing—no manufacturer's test kit instructions to determine whether the sample is actually repeatedly reactive
- Must obtain and review the results of all three tests performed by OPO
- Only if all 3 test results are negative would the donor be eligible to donate

- Specimen collection § 1271.80(b) requirement for specimens to be collected within 7 days before or after recovery of HCT/Ps (with some exceptions)
- You may use premortem specimens to test a cadaveric donor, as long as the specimen is collected within the regulatory timeframe
- HPC donor specimen collection up to 30 days prior to HCT/P collection b/c of myeloablation of recipient
- Oocyte donor specimen collection up to 30 days prior because of hormonal stimulation of donor

- No specific guidance given for interpreting test results – too many different testing algorithms; follow the product insert instructions
- No specific guidance given for when testing should be performed once collected – should follow product insert (some have time limits on how long after collection specimens can be tested) and if no time limits are mentioned, we recommend testing as soon as possible after collection

Plasma dilution

- Recommendations relatively unchanged from draft guidance
- Algorithm given to evaluate plasma dilution in donors who have received any crystalloids or colloids
- Plasma dilution assessment applies to all donors, living and nonliving
- Total parenteral nutrition (TPN) considered a crystalloid

Testing

- Tests that we currently consider to meet the requirements in §1271.80(c) to adequately and appropriately reduce the risk of transmission of RCDADs
- HIV, type 1 (FDA-licensed screening test either for anti-HIV-1 or combination test for anti-HIV-1 and anti-HIV-2; and FDA-licensed screening NAT test for HIV-1, or combination NAT); (establishments not utilizing an FDAlicensed screening test that tests for group O antibodies must evaluate donors for risk associated with HIV group O infection as described in section IV.E.27. and 28. of the guidance)

Testing

- HIV, type 2 (FDA-licensed screening test either for anti-HIV-2 or combination test for anti-HIV-1 and anti-HIV-2)
- HBV (FDA-licensed screening test for Hepatitis B surface antigen (HBsAg) and for total antibody to Hepatitis B core antigen (anti-HBc)(IgG and IgM)
- HCV (FDA-licensed screening test for anti-HCV; and FDA-licensed screening NAT test for HCV, or combination NAT)

Testing

- Treponema pallidum (FDA-cleared screening test) (FDA-cleared screening test for syphilis or FDA-cleared diagnostic serologic test for syphilis⁶)
- As an exception for syphilis test results under §
 1271.80(d)(1), you may determine to be eligible a
 donor whose specimen tests positive or reactive on a
 non-treponemal screening test for syphilis and
 negative or nonreactive on a specific treponemal
 confirmatory test (e.g., fluorescent treponemal
 antibody with absorption test (FTA-ABS)), so long as
 all other required testing and screening are negative
 or nonreactive.

⁶For purposes of this guidance, we consider FDAcleared diagnostic serological tests to be adequate for use in donor screening for syphilis.

Testing

- A donor whose specimen tests positive or reactive on either a specific treponemal confirmatory test for syphilis or on a treponemal screening test is not eligible.
- If a cadaveric specimen is too hemolyzed to interpret the Rapid Plasma Reagin (RPR) test result, you should use another test, such as the FTA-ABS test result.
- The guidance gives additional information about syphilis testing helpful for interpreting results

Testing

Viable, leukocyte-rich HCT/Ps

- The tests listed in this section adequately and appropriately reduce the risk of transmission of relevant communicable diseases:
 - Human T-lymphotropic virus, types I and II (FDAlicensed screening test for anti-HTLV I/II)
 - Cytomegalovirus (FDA-cleared screening test for anti-CMV) (total IgG and IgM).

Testing donors of reproductive HCT/Ps

- You must test donors of reproductive HCT/Ps (who are not sexually intimate partners) for evidence of infection due to relevant genitourinary disease agents (§ 1271.85(c)). These include:
 - Chlamydia trachomatis; and
 - Neisseria gonorrhea.

Testing donors of reproductive HCT/Ps

- Currently, there are no FDA-licensed, cleared or approved donor screening tests for chlamydia or gonorrhea
- FDA recommends Chlamydia trachomatis and Neisseria gonorrhea diagnostic tests utilizing NAT technology to adequately and appropriately reduce the risk of infectious disease transmission

Testing donors of reproductive HCT/Ps

 If the reproductive cells or tissue are recovered by a method that ensures freedom from contamination of the cells or tissue by infectious disease organisms that may be present in the genitourinary tract, then tests for Chlamydia trachomatis and Neisseria gonorrhea are not required (§ 1271.85(c)). However, if these tests are performed and one or both results are reactive, the donor must be determined ineligible, regardless of the recovery method used (§ 1271.80(d)(1)).

Exceptions from DEdetermination

- There are five situations in which you are not required to make a determination of donor eligibility or to perform donor screening and testing (§ 1271.90(a) and §1271.15(a)).
- You must apply special labels if you do not screen and test (§ 1271.90(b)).
- The exceptions and labeling are described in detail in the guidance.

Ineligible donors

- Under §1271.65(b), an HCT/P from an ineligible donor, based on required testing and/or screening results, is not prohibited from use for implantation, transplantation, or transfer in the following three circumstances.
- The HCT/P is for allogeneic use in a first-degree or second-degree blood relative.

Ineligible donors

- 2. The HCT/P consists of reproductive cells or tissue from a directed reproductive donor.
- There is an urgent medical need for the HCT/P based upon a physician's request and documented by the establishment.
- DE determination must be performed
- Labeling requirements apply
- Manufacturer must document that the physician using the HCT/P was notified of results of screening & testing

Ineligible Donors

 The nonclinical use of HCT/Ps from a donor determined to be ineligible is not prohibited, so long as the HCT/Ps are labeled "For Nonclinical Use Only" and with a biohazard legend (§ 1271.65(c))

Questions?

CBER Contact Information

Website:

http://www.fda.gov/cber

- Email CBER:
 - Manufacturers: <u>matt@cber.fda.gov</u>
 - Consumers, health care professionals

octma@cber.fda.gov

• Phone:

301-827-2000 800-835-4709

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